

REMARKS

Upon careful and complete consideration of the Office Action dated April 8, 2003, applicants have amended the claims which, when considered in conjunction with the comments herein below, are deemed to place the present application into condition for allowance. Favorable reconsideration of this application, as amended, is respectfully solicited.

The Office Action objected to the abstract of the disclosure for allegedly failing to enable the reader thereof to ascertain quickly the character and nature of the invention, and to include that which is novel in the art to which it pertains. An amended abstract is being submitted herewith to satisfy the objections made by the Examiner.

The Office Action objected to claims 2, 13 and 22 for informalities found therein. The spelling errors and improper punctuations identified by the Examiner have been corrected. Based on these amendments, applicant respectfully requests that the objection to these claims be withdrawn.

Claims 1-49 were then rejected by the Office Action under 35 U.S.C. §112, second paragraph, as allegedly “being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.”

Claim 1 was rejected for being unclear with respect to the recitation of “a method for recovering a monosaccharide” but yet defining said monosaccharide as being selected from the group consisting of rhamnose, arabinose, xylose and mixtures thereof. Claim 1 has been amended to clearly indicate that the method of

the present invention is directed to a multistep process for recovering **one or more** monosaccharides from a solution, with said solution containing at least two monosaccharides selected from the group consisting of rhamnose, arabinose, xylose and mixtures thereof.

Claim 2 was similarly rejected and has also been amended to remove any ambiguity with respect to the Markush terminology and the reference to monosaccharides.

Claim 1 was also rejected for allegedly being indefinite as being directed to a multistep process but only reciting a single step. Claim 1 as amended still remains directed to a multistep process for the recovery of one or more monosaccharides using chromatographic separation. The method is further defined in that the chromatographic separation which is used in the multistep process comprises at least one step where a weak acid cation exchange resin is used for the chromatographic separation. It is respectfully submitted that the two do not contradict one another and the skilled artisan can clearly recognize what is being claimed.

Claim 5 as originally submitted appeared to have gaps or omissions of text. This was not the case and the improper spacing of the text has simply been corrected.

Claim 7 was rejected as allegedly being indefinite with respect to defining the solution containing rhamnose as a “xylose process stream or side stream”. It is respectfully submitted that these terms are terms of art recognized to the skilled artisan. Support can be found in the subject specification near the top of page 7.

Claim 8 has been amended to clearly indicate that an arabinose rich fraction is to be further separated and recovered in addition to the rhamnose fraction.

Similarly, claim 10 has been amended to clearly indicate that a xylose rich fraction is to be further separated and recovered in addition to the rhamnose fraction. As is clearly detailed in the subject specification, the time at which these additional steps are performed may vary depending upon the variable process parameters and should not be unclear to the skilled artisan.

The Markush language of claim 13 has been amended and claims 14 and 15 have been amended to indicate that the various ionic forms identified in said claim pertain to the cation of the weak acid cation exchange resin rather than the resin itself. Said claims should now be clearly understood.

Claims 18, 27 and 28 were all rejected for the lack of antecedent basis for use of the term “the eluant”. These claims have been amended to ultimately depend upon claim 2 wherein sufficient antecedent basis can be found.

Regarding claim 19, the phrase “the solution containing rhamnose” has been amended simply to “the solution” referring back to claim 1. With respect to the use of the term “fraction”, it is respectfully submitted that it is clear to the skilled artisan from the description that it is “fractions of the starting solution” which are being fed from one column to the next.

Claims 20-26 were also rejected for the use of the terms “a fraction” or “the fraction”. The identity of the fractions is believed to be clear.

Claims 31-33 have been amended to delete the insufficient antecedent basis identified by the Examiner. Claims 34-35 have been amended to make it clear that both xylose and arabinose are collected from both the first and second columns. The dependencies of claims 36 and 39-41 have been amended and are believed to clear

up the indefiniteness raised by the Examiner. Also, the dependencies of claims 37 and 38 have been amended to provide sufficient antecedent basis for the terminology used therein.

The rejection of claims 43 and 44 have partly been overcome by the amendment to claim 1. These claims have also been amended to refer to “monosaccharides” rather than simply “saccharides”. Finally, these claims have also been amended to identify the solution of claim 1 as including rhamnose.

Claim 48 has been amended to be dependent upon claim 46, thus removing the indefiniteness rejection raised by the Examiner.

Based on the amendments made to the claims, it is respectfully requested that all the rejections of these claims be withdrawn.

Finally, the use of the terms “weakly” and “strongly” throughout the claims were rejected as allegedly being indefinite terms which rendered these claims indefinite. All of the involved claims have been amended by changing the words “weakly” and “strongly” to read “weak” and “strong”, respectively. It is respectfully submitted that the terms “weak acid cation exchange resin” and “strong acid cation exchange resin” now found in the claims are terms of art and are recognized by the skilled artisan such that they would be reasonably apprised of the scope of the invention. Accordingly, the rejection of these claims are respectfully requested to be withdrawn.

Finally, it is further submitted that all the claims in the application contain patentable subject matter and a Notice of Allowance is respectfully solicited.

Respectfully submitted,



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